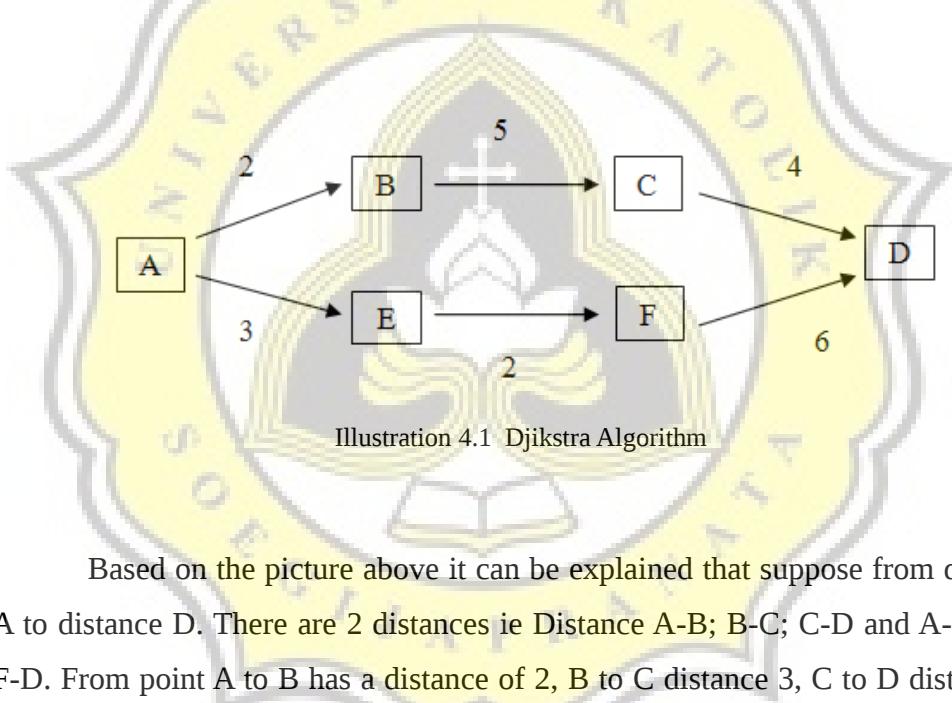


CHAPTER 4

ANALYSIS AND DESIGN

4.1 Analysis

This algorithm aims to find the shortest path based on the smallest weight from one point to another. For example the point of depicting the building and the line represents the path, the Dijkstra algorithm performs a calculation of all possible smallest weights of any point.



Based on the picture above it can be explained that suppose from distance A to distance D. There are 2 distances ie Distance A-B; B-C; C-D and A-E; E-F; F-D. From point A to B has a distance of 2, B to C distance 3, C to D distance 4. When the operation in add the result: $2 + 3 + 4$ result is 9. Then look distance at E. From point A to E is 3, E to F is 2, F into D is 6. Its added Djikstra operation is $3 + 2 + 6$, then the result is 11. So AB; B-C; C-D with a total of 9 while A-E; A-F; F-D for a total of 11. Then the shortest route is A-B; B-C and C-D.

4.2 Desain

There are 4 menus in the program. First menu. The amount of node and the name of node input by user. Second menu input the distance, beginning node and end node. After input display input to user. Third node is where Djikstra Algorithm work. Read a possibility path source node to final node, count all the distance, take the smallest result distance, show to user. In there source node and final node input by user. The fourth menu is back to home.

